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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/468,673	12/21/1999	D LANSING TAYLOR	97223D	3907

20306 7590 06/04/2002

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EXAMINER

PADMANABHAN, KARTIC

ART UNIT	PAPER NUMBER
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1641

DATE MAILED: 06/04/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/468,673

Applicant(s)

TAYLOR, D LANSING

Examiner

Kartic Padmanabhan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 December 2001.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 9-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 9-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 6/20/01 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1 and 9-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cherkuri et al. (US Pat. 5,980,704) in view of Sanadi (US Pat. 5,741,463).

Cherkuri et al. teach a cassette/fluid array (device tray) including micron-sized reservoirs, connected microchannels (fluid delivery system), and reaction cells etched into a substrate. The cassette is multi-layered, wherein three plates are stacked vertically and coupled together to form a liquid-tight seal. The reference further teaches the use of overflow feeds that control the reagent fluid level. The level of fluid is stabilized by draining excess fluids into these overflow feeds. The reference does not teach a plurality of wells defining the space between the cell binding location and the fluidic location.

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Sanadi teaches a cassette that prevents cross-contamination of samples by using a resilient gasket that covers the top of the plate. The gasket may be a unitary sheet with or without an array of openings corresponding to the well openings. This cassette provides a sealed array of various array assemblies of any size and shape.

It would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention to use a space defining binding locations and the fluid location as taught by Sanadi with the cassette of Cherkuri et al. because such cassette array devices with well spacing between the fluid delivery system and binding locations are well known in the art, thereby providing a reasonable expectation of success in utilizing such a configuration.

Response to Arguments

4. Applicant's arguments filed December 12, 2001 have been fully considered and are persuasive to overcome the 102 rejection over Dunlay et al. but they are not persuasive to overcome the 103 obviousness rejection over Cherkuri et al. in view of Sanadi.

5. First, in terms of the arguments with respect to the IDS, it is noted that, as mentioned in the previous office action, only those references that were listed by the examiner on PTO-892 were not initialed on PTO-1449. Therefore, these references, though not initialed, were examined, and would appear on the face of the patent, should this application issue at some point.

6. Applicant has argued that the combination of Cherkuri et al. and Sanadi et al. fail to teach all the limitations, especially a surface containing cell binding sites comprising wells and a plurality of domains matching the wells on the surface, of the instant claims. This argument is erroneous. The primary reference, Cherkuri et al., clearly teaches a bottom cell plate comprising

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a plurality of micron-sized reaction wells, which qualifies as the base having a surface containing cell binding sites comprising wells. Above this bottom plate is situated a center distribution plate divided into a plurality of sectors configured in a grid pattern. Each sector is positioned directly above a reaction cell, which qualifies as the plurality of domains matching the wells on the base (See Col. 3, lines 21-41).

7. In addition, applicant's arguments that the references fail to teach a plug or raised reservoirs, which are limitations in various dependent claims, is also erroneous. The plurality of dams of Cherkuri et al. qualify as plugs, and as raised reservoirs and etched domains form a Markush group, since Cherkuri et al. teach etched domains, the limitations of those claims are met.

Conclusion

Claims 1 and 9-22 are rejected.

References: Hayes et al. and Balch et al. are cited as art of interest for teaching various analysis systems with microarrays and/or microfluidics.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kartic Padmanabhan whose telephone number is 703-305-0509.

The examiner can normally be reached on M-F (8:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long Le can be reached on 703-305-3399. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-5207 for regular communications and 703-305-3014 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0196.

Kartic Padmanabhan
Patent Examiner
Art Unit 1641

May 23, 2002


LONG V. LE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600

05/31/02